WHAT IS CLAIMED:

5

10

20

1. A compound having the formula:

$$(R^{1})_{n}$$

$$(R^{2})_{n}$$

or a pharmaceutically acceptable salt or solvate thereof, wherein:

Q is CF_3SO_2 , $CF_3SO_2NR^3$, $CF_3SO_2R^4$ or $CF_3SO_2N(R^3)R^4$, wherein R^3 is H, alkoxy, acyl or C_1 - C_3 alkyl, each of which may be substituted or unsubstituted, and R^4 is methylene which may be substituted or unsubstituted;

each R¹ is independently C₁-C₃ alkyl, C₁-C₃ haloalkyl, CN, (C=O)OR, (C=O)R⁵, H, halo, O(C=O)R, OR, OH, NHR, NH(C=O)OR, NH(C=O)R⁵, NO₂, NHSO₂R⁵, SO₂R⁵, R⁴SO₂CF₃ or tetrazole, wherein R⁵ is CF₃, C₁-C₃ alkyl, NHR and wherein R is H, C₁-C₃ alkyl, aryl or heteroaryl, which may be substituted or unsubstituted;

each R² is independently C₁-C₃ alkyl, C₁-C₃ haloalkyl, CN, (C=O)OR, (C=O)R⁵, H,

halo, O(C=O)R, OR, OH, NHR, NH(C=O)OR, NH(C=O)R⁵, NO₂, NHSO₂R⁵, SO₂R⁵,

tetrazole, or X¹-R⁶-X², wherein X¹ is present or absent and if present is O, N, (C=O),

(C=O)NH, NH(C=O), SO₂NH, NHSO₂, R⁶ is C₁-C₃ alkylene which may be substituted or unsubstituted and X² is CF₃, (C=O)OR, (C=O)R⁵, H, NH(C=O)R⁵, NH(C=O)OR, NHSO₂R⁵,

NRR³, O(C=O)R, OR, SO₂R⁵, tetrazole;

each n is independently from 0 to 3;

ring B is an aryl, carbocyclic, heteroaryl, heterocyclic or phenyl ring which may be substituted or unsubstituted;

A1 is a linkage in which the shortest path is 2-8 atoms in length wherein the atoms in the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with a single nitrogen or oxygen, or combination of nitrogen, oxygen and sulfur provided no two heteroatoms are adjacently linked in a linear linkage; the linkage may be or may contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which may be directly in the linkage or appended to the linkage; the linkage may be acylalkyl, alkenylene, alkoxy. alkoxyalkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl, alkoxyarylamino, alkoxyaryloxyalkyl, alkylamino, alkylaminoalkyl, alkylaminoarylaminoalkyl, alkylaryl, alkylarylalkyl, alkylarylamino, alkylaryloxy, alkylene, alkylenediamine, alkylenedioxy, alkyloxy, alkyloxyaryl, alkyloxyarylalkyloxy, alkyloxyaryloxyalkyl, C₁-C₆ alkylsulfonylamino, alkylthio, alkylthioalkyl, alkynylene, C₁-C₆ N-sulfonamido, C₃-C₇ Namido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl, aminoalkylarylalkylamino, aminoalkylaryloxy, aminoalkyloxy, aminoaryl, aminoarylalkyl, aminoarylcarbonyl, aminoaryloxy, aminoaryloxyalkyl, aminoarylsulfonyl, aryl, arylamino, ortho or para aryldioxy, substituted meta-aryldioxy, aryldiamine, aryloxy, aryloxyalkyl, aryloxyamino, aryloxyaminoalkyl, aryloxycarbonyl, aryloxysulfonyl, benzimidazole, benzo[b]furan, benzo[b]thiophene, C₃-C₇ C-amido, carbonylarylamino, carbonylarylcarbonyl, carbonylaryloxy, chromene, cycloalkylene, disulfide, furan, haloalkyl, imidazole, imidazolidine, imidazoline, indole, isothiazole, isoxazole, morpholine, oxadiazole, oxazole, oxirane, parathiazine, phenothiazine, piperazine, piperidine, purine, pyran, pyrazine, pyrazole, pyrazolidine, pyrimidine, pyridine, pyrrole, pyrrolidine, quinoline, C₂-C₆ Ssulfonamido, sulfonylalkyl, sulfonylarylamino, sulfonylaryloxy, sulfonylarylsulfonyl, thiadiazole, thiazole, thiophene, triazine, triazole, unsubstituted azeridine, C₃-C₆ ureido, which may be substituted or unsubstituted; and

5

10

15

20

25

30

A² is a linkage in which the shortest path is 0-6 atoms in length wherein the atoms in the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with a single nitrogen, oxygen or sulfur, or combination of nitrogen, oxygen and sulfur; the linkage may be or may contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which may be directly in the linkage or appended to the linkage; the linkage may be single atom C, O, S or N which may be substituted or unsubstituted; the linkage may be acylalkyl, alkoxyalkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl,

alkoxyarylamino, alkoxyaryloxyalkyl, alkylamino, alkylaminoalkyl, alkylaminoarylaminoalkyl, alkylaryl, alkylarylalkyl, alkylarylamino, alkylaryloxy, alkylene, alkylenediamine, alkylenedioxy, alkyloxy, alkyloxyaryl, alkyloxyarylalkyloxy, alkyloxyaryloxyalkyl, alkylsulfonylamino, alkylthio, alkylthioalkyl, alkynylene, N-5 sulfonamido, N-amido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl, aminoalkylarylalkylamino, aminoalkylaryloxy, aminoalkyloxy, aminoaryl, aminoarylalkyl, aminoarylcarbonyl, aminoaryloxy, aminoaryloxyalkyl, aminoarylsulfonyl, aryl, arylamino, ortho or para aryldioxy, substituted meta-aryldioxy, aryldiamine, aryloxy, aryloxyalkyl, aryloxyamino, aryloxyaminoalkyl, aryloxycarbonyl, aryloxysulfonyl, benzimidazole. benzo[b]furan, benzo[b]thiophene, C-amido, carbonylarylamino, carbonylarylcarbonyl. 10 carbonylaryloxy, chromene, cycloalkylene, furan, haloalkyl, imidazole, imidazolidine, imidazoline, indole, isothiazole, isoxazole, morpholine, oxadiazole, oxazole, oxirane, parathiazine, phenothiazine, piperazine, piperidine, purine, pyrazine, pyrazole, pyrazolidine, pyrimidine, pyridine, pyrrole, pyrrolidine, quinoline, sulfonamido, sulfonylalkyl, sulfonylarylamino, sulfonylaryloxy, sulfonylarylsulfonyl, thiadiazole, thiazole, 15 thiophene, triazine, triazole, unsubstituted azeridine, ureido, which may be substituted or unsubstituted.

2. The compound of claim 1 wherein Q is CF_3SO_2 .

20

- 3. The compound of claim 1 wherein Q is CF₃SO₂NR³.
- 4. The compound of claim 1 wherein Q is CF₃SO₂R⁴.
- The compound of claim 1 wherein Q is $CF_3SO_2N(R^3)R^4$.
 - 6. The compound of claim 1 wherein the compound has formula I.
 - 7. The compound of claim 1 wherein the compound has formula II.
 - 8. The compound of claim 1 wherein the compound has formula III.

- 9. The compound of claim 1 wherein R² is SO₂R⁵, NHSO₂R⁵ or CF₃SO₂R⁴.
- 10. A compound having the formula:

$$(R^{1})_{n}$$

$$(R^{2})_{n}$$

or a pharmaceutically acceptable salt or solvate thereof, wherein:

Q is CF_3SO_2 ;

5

10

15

20

each R1 is independently CF3, (C=O)OR, (C=O)R5, H, halo, NHR, NH(C=O)OR, NH(C=O)R5, NHSO2R5, NO2, O(C=O)R, OH, OR, SO2R5 or tetrazole, wherein R5 is CF3, C1-C3 alkyl, NHR and wherein R is H, C1-C3 alkyl, aryl or heteroaryl, which may be substituted or unsubstituted;

each R2 is independently (C=O)OR, (C=O)R5, NH(C=O)OR, NH(C=O)R5, NHR, NHSO2R5, NO2, -R6-(C=O)OR, -R6-NRR3, -R6-tetrazole, or tetrazole and R6 is C1-3 alkylene which may be substituted or unsubstituted;

each n is independently from 0 to 2;

ring B is phenyl or heteroaryl which may be substituted or unsubstituted; and linkage A1 is C2-C4 alkoxy, C2-C4 alkoxyalkyl, C2-C4 alkylenedioxy, C2-C4 alkylenedioxy, C2-C4 alkylenediamine, C3-C4 C-amido, C3-C4 N-amido, C3-C4 ureido, C1-C3 N-sulfonamido, C2-C3 S-sulfonamido, aryldioxy, aryldiamine, aryl, alkylarylalkyl, imidazole, oxazole, oxadiazole, pyrazole, pyrazolidine, pyrrole or triazole.

11. A compound having the formula:

$$(R^{1})_{n}$$

$$(R^{2})_{n}$$

or a pharmaceutically acceptable salt or solvate thereof, wherein:

Q is CF₃SO₂NR³, CF₃SO₂R⁴ or CF₃SO₂N(R³)R⁴, wherein R3 is H, alkoxy, acyl or C1-C3 alkyl each of which may be substituted or unsubstituted and R4 is methylene which may be substituted or unsubstituted;

each R1 is independently CF3, (C=O)OR, (C=O)R5, H, halo, NHR, NH(C=O)OR, NH(C=O)R5, NHSO2R5, NO2, O(C=O)R, OH, OR, SO2R5 or tetrazole,

wherein R5 is CF3, C1-C3 alkyl, NHR and wherein R is H, C1-C3 alkyl, aryl or heteroaryl, which may be substituted or unsubstituted;

each R2 is independently (C=O)OR, (C=O)R5, NH(C=O)OR, NH(C=O)R5, NHR, NHSO2R5, NO2, SO2R5, -R6-(C=O)OR, -R6-NRR3, -R6-tetrazole, or tetrazole and R6 is C1-3 alkylene which may be substituted or unsubstituted;

each n is independently from 0 to 2;

5

10

15

20

ring B is phenyl or heteroaryl which may be substituted or unsubstituted; and linkage A1 is C2-C4 alkoxy, C2-C4 alkoxyalkyl, C2-C4 alkylenedioxy, C2-C4 alkylenedioxy, C2-C4 alkylenediamine, C3-C4 C-amido, C3-C4 N-amido, C3-C4 ureido, C1-C3 N-sulfonamido, C2-C3 S-sulfonamido, aryldioxy, aryldiamine, aryl, alkylarylalkyl, imidazole, oxazole, oxadiazole, pyrazole, pyrazolidine, pyrrole or triazole.

12. A compound having the formula:

$$(R^1)_n$$

$$A^1$$

$$(R^2)_n$$

or a pharmaceutically acceptable salt or solvate thereof, wherein:

Q is CF₃SO₂;

each R1 is independently H, NHR, NO2 or OR;

each R2 is independently (C=O)OR, NHSO2R5, or SO2R5;

each n is independently from 0 to 2; and the linkage A1 is alkylarylalkyl, C2-C4 alkoxyalkyl, C2-C4 alkylenedioxy, aryl, aryldiamine, aryldioxy, or oxadiazole which may be substituted or unsubstituted or A1 is unsubstituted or monosubstituted C2-C4 N-amido.

10

5

13. The compound of claim 11 having the formula:

$$R^1$$
 A^1
 R^2
 (IV)

or a pharmaceutically acceptable salt or solvate thereof, wherein:

15

R1 is H or NO2;

R2 is (C=O)OR, NHSO2R5 or SO2R5; and

the linkage Al is C2-C4 alkoxyalkyl, aryldioxy, aryl, alkylarylalkyl or oxadiazole.

14. The compound of claim 12 wherein the compound is:

Bis(4-Trifluoromethylsulfonylbenzyl) ether;

4-Trifluoromethylsulfonylbenzyl 4-trifluoromethylsulfonylphenyl ether;

N,N-Bis(4-triluoromethylsulfonylbenzyl)benzamide;

1,2-Bis(4-trifluoromethylsullfonylphenyl)ethane;
N-(4-Trifluoromethylsulfonylbenzyl)-4-trifluoromethylsulfonylbenzamide;

N-(4-Trifluoromethylsulfonylbenzyl)benzamide;

- 3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;
- [3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-phenyl]-acetic acid methyl ester;
 - 3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;
 - 1,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-cyclopentane;
 - 4-Methyl-2,6-bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl
- 10 ester;

5

- 4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid methyl ester;
- 4-[3-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;
- 1-(3,5-Bis-trifluoromethyl-phenyl)-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-1*H*-pyrazole-3-carboxylic acid methyl ester;
- 15 {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}acetic acid ethyl ester;
 - 4-[3-(4-Trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;
 - {4-[4-(4-Trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid ethyl ester;
- 20 *N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{2-[(3-trifluoromethanesulfonyl-phenyl)-methyl]-phenyl}-acetamide;
 - *N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{3-[(3-trifluoromethanesulfonyl-phenyl)-methyl]-phenyl}-acetamide;
 - *N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{4-[(3-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;
 - 3,6-Bis-(morpholin-4-ylmethyl)-2,5-bis-(2-nitro-4-trifluoromethanesulfonylphenoxy)-benzene;
 - [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-dimethyl-amine;
 - N-(2-Ethylamino-5-trifluoromethanesulfonyl-phenyl)-2-(4-methanesulfonyl-phenyl)-
- 30 acetamide;

```
2-Hydroxy-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl
      ester;
             {2-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;
             {3-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid:
 5
             {4-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;
             3.5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzamide;
             3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid;
            N-(4-Trifluoromethanesulfonyl-phenyl)-2-{2-[(4-trifluoromethanesulfonyl-
      phenylcarbamoyl)-methyl]-phenyl}-acetamide;
            N-(4-Trifluoromethanesulfonyl-phenyl)-2-{3-[(4-trifluoromethanesulfonyl-
10
      phenylcarbamoyl)-methyl]-phenyl}-acetamide;
            N-(4-Trifluoromethanesulfonyl-phenyl)-2-{4-[(4-trifluoromethanesulfonyl-
      phenylcarbamoyl)-methyl]-phenyl}-acetamide;
             4-(1-Ethyl-5-trifluoromethanesulfonyl-1H-benzoimidazol-2-yl)-benzoic acid methyl
15
     ester:
            4-(1-Ethyl-5-trifluoromethanesulfonyl-1H-benzoimidazol-2-yl)-benzoic acid;
            4-(1-Ethyl-5-trifluoromethanesulfonyl-1H-benzoimidazol-2-yl)-N-pyridin-4-yl-
      benzamide;
            4-(1-Ethyl-5-trifluoromethanesulfonyl-1H-benzoimidazol-2-yl)-N-(4-methoxy-
20
     phenyl)-benzamide;
            3-[4-(1-Ethyl-5-trifluoromethanesulfonyl-1H-benzoimidazol-2-yl)-benzoylamino]-
      benzoic acid ethyl ester;
            4-(1-Ethyl-5-trifluoromethanesulfonyl-1H-benzoimidazol-2-yl)-N-(2-pyrrolidin-1-yl-
     ethyl)-benzamide;
            N-Ethyl-4-(1-ethyl-5-trifluoromethanesulfonyl-1H-benzoimidazol-2-yl)-benzamide;
25
             1-Ethyl-5-trifluoromethanesulfonyl-1H-benzoimidazole-2-carboxylic acid;
             [2-(Benzoyl-butyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic
     acid methyl ester;
            N-Benzyl-N-[butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-
     benzamide;
30
```

ethyl)-benzamide; [2-(Acetyl-cyclopropyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]acetic acid ethyl ester; 5 [2-(Acetyl-methyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylaminol-acetic acid ethyl ester; [2-(Benzoyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]acetic acid ethyl ester; N-Cyclohexyl-N-[(2,6-dimethyl-phenylcarbamoyl)-(4-trifluoromethanesulfonyl-10 phenyl)-methyll-benzamide; [2-(Acetyl-propyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester; [2-(Acetyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]acetic acid ethyl ester; {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-15 acetic acid; 4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid; 2,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester; 1-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-piperidine; 20 4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-morpholine; [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(2-nitro-phenyl)amine; 1-(2-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2ol; 25 [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(4-nitro-phenyl)amine; 1-(4-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2ol; 4-[2-Hydroxy-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-30 benzenesulfonamide; or

N-[Butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-N-(2-hydroxy-

4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-benzenesulfonamide.

```
15.
                    The compound of claim 13 wherein the compound is:
 5
             1,2-Bis(4-trifluoromethylsulfonamidophenyl)ethane;
             1,2-Bis(2-methyl-4-trifluoromethylsulfonamidophenyl)ethane;
             1,3-Bis(4-trifluoromethylsulfonamidophenoxy)-2,2-dimethylpropane;
             1,3-Bis(4-trifluoromethylsulfonamidophenoxy)propane;
             1,4-Bis(4-trifluoromethylsulfonamidophenoxy)butane;
10
             1,4-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;
             1-(4-Aminophenoxy)-4-trifluoromethylsulfonamidophenoxy benzene;
             Bis(4-trifluoromethylsulfonamidophenyl) ether;
             1,3-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;
             2,5-Bis(4-trifluoromethylsulfonamidophenyl)-(1,3,4)oxadiazole;
15
             Bis(4-trifluoromethylsulfonamidophenyl)-1,4-diisopropylbenzene;
             5-Trifluoromethanesulfonylamino-1H-indole-2-carboxylic acid;
             1-Methyl-5-trifluoromethanesulfonylamino-1H-indole-2-carboxylic acid;
             (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid;
             1-Methyl-5-trifluoromethanesulfonylamino-1H-indole-2-carboxylic acid phenylamide;
             5-Trifluoromethanesulfonylamino-1H-indole-2-carboxylic acid phenylamide;
20
             3-[(1-Methyl-5-trifluoromethanesulfonylamino-1H-indole-2-carbonyl)-amino]-
      benzoic acid;
             3-[(5-Trifluoromethanesulfonylamino-1H-indole-2-carbonyl)-amino]-benzoic acid;
             4-[(5-Trifluoromethanesulfonylamino-1H-indole-2-carbonyl)-amino]-benzoic acid;
25
             4-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic
      acid;
             3-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic
      acid;
             4-{[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-methyl}-
30
      benzoic acid;
             (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid tert-butyl ester;
```

- 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
- 6-Trifluoromethanesulfonylamino-naphthalene-2-carboxylic acid;
- N,N-Bis[(6-carboxyl-naphthalen-2-yl)methyl] trifluoromethanesulfonamide;
- 6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carboxylic acid;
- 3-({6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carbonyl}-amino)-benzoic acid;
- 1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
- 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester:
 - 1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;

- 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;
- 1-Carboxymethyl-5-(*N*,*N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid ethyl ester;
- 1-*tert*-Butoxycarbonylmethyl-5-(*N*,*N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid ethyl ester;
- 1-Carboxymethyl-5-(*N*,*N* ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid;
- 20 1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
 - 1-Benzyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; or 1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid.
- 25 16. A pharmaceutical composition comprising a compound having the formula:

$$(R^{1})_{n}$$

$$(R^{2})_{n}$$

or a pharmaceutically acceptable salt or solvate thereof, wherein:

5

10

15

20

Q is CF_3SO_2 , $CF_3SO_2NR^3$, $CF_3SO_2R^4$ or $CF_3SO_2N(R^3)R^4$, wherein R^3 is H, alkoxy, acyl or C_1 - C_3 alkyl, each of which may be substituted or unsubstituted, and R^4 is methylene which may be substituted or unsubstituted;

each R1 is independently C1-C3 alkyl, C1-C3 haloalkyl, CN, (C=O)OR, (C=O)R5, H, halo, NHR, NH(C=O)OR, NH(C=O)R5, NO2, NHSO2R5, O(C=O)R, OR, OH, SO2R5, R4SO2CF3 or tetrazole, wherein R5 is CF3, C1-C3 alkyl, NHR and wherein R is H, C1-C3 alkyl, aryl or heteroaryl, which may be substituted or unsubstituted;

each R2 is independently C1-C3 alkyl, C1-C3 haloalkyl, CN, (C=O)OR, (C=O)R5, H, halo, O(C=O)R, OR, OH, NHR, NH(C=O)OR, NH(C=O)R5, NO2, NHSO2R5, SO2R5, tetrazole, or X1-R6-X2 wherein X1 may be present or absent and if present is O, N, (C=O), (C=O)NH, NH(C=O), SO2NH, NHSO2;

R6 is C1-3 alkylene which may be substituted or unsubstituted;

X2 is CF3, (C=O)OR, (C=O)R5, H, NH(C=O)R5, NH(C=O)OR, NHSO2R5, NRR3, O(C=O)R, OR, SO2R5, tetrazole;

each n is independently from 0 to 3;

ring B is an aryl, carbocyclic, heteroaryl, heterocyclic or phenyl ring which may be substituted or unsubstituted;

Al is a linkage in which the shortest path is 2-8 atoms in length wherein the atoms in the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with a single nitrogen or oxygen, or combination of nitrogen, oxygen and sulfur provided no two

heteroatoms are adjacently linked in a linear linkage; the linkage may be or may contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which may be directly in the linkage or appended to the linkage; the linkage may be acylalkyl, alkenylene, alkoxy. alkoxyalkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl, alkoxyarylamino, alkoxyaryloxyalkyl, alkylamino, alkylaminoalkyl, alkylaminoarylaminoalkyl, alkylaryl, alkylarylalkyl, alkylarylamino, alkylaryloxy, alkylene, alkylenediamine, alkylenedioxy, alkyloxy, alkyloxyaryl, alkyloxyarylalkyloxy, alkyloxyaryloxyalkyl, C1-C6 alkylsulfonylamino, alkylthio, alkylthioalkyl, alkynylene, C1-C6 N-sulfonamido, C3-C7 Namido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl, aminoalkylarylalkylamino, aminoalkylaryloxy, aminoalkyloxy, aminoaryl, aminoarylalkyl, aminoarylcarbonyl, aminoaryloxy, aminoaryloxyalkyl, aminoarylsulfonyl, aryl, arylamino, aryldioxy, aryldiamine, aryloxy, aryloxyalkyl, aryloxyamino, aryloxyaminoalkyl, aryloxycarbonyl, aryloxysulfonyl, benzimidazole, benzo[b]furan, benzo[b]thiophene, C3-C7 C-amido, carbonylarylamino, carbonylarylcarbonyl, carbonylaryloxy, chromene, cycloalkylene, disulfide, furan, haloalkyl, imidazole, imidazolidine, imidazoline, indole, isothiazole, isoxazole, morpholine, oxadiazole, oxazole, oxirane, parathiazine, phenothiazine, piperazine, piperidine, purine, pyran, pyrazine, pyrazole, pyrazolidine, pyrimidine, pyridine, pyrrole, pyrrolidine, quinoline, C2-C6 S-sulfonamido, sulfonylalkyl, sulfonylarylamino, sulfonylaryloxy, sulfonylarylsulfonyl, thiadiazole, thiazole, thiophene, triazine, triazole, unsubstituted azeridine, C3-C6 ureido, which may be substituted or unsubstituted;

5

10

15

20

25

30

A² is a linkage in which the shortest path is 0-6 atoms in length wherein the atoms in the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with a single nitrogen, oxygen or sulfur, or combination of nitrogen, oxygen and sulfur; the linkage may be or may contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which may be directly in the linkage or appended to the linkage; the linkage may be single atom C, O, S or N which may be substituted or unsubstituted; the linkage may be acylalkyl, alkenylene, alkoxy, alkoxyalkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl, alkoxyarylamino, alkoxyarylanino, alkylaminoalkyl, alkylaryla, alkylarylalkyl, alkylarylamino, alkylaryloxy, alkylene, alkylenediamine, alkylenedioxy, alkyloxy, alkyloxyaryl, alkyloxyarylalkyloxy, alkyloxyaryloxyalkyl, alkylsulfonylamino, alkylthio, alkylthioalkyl, alkynylene, N-

sulfonamido, N-amido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl, aminoarylalkylamino, aminoalkylaryloxy, aminoarylalkyl, aminoarylalkyl, aminoarylalkyl, aminoarylalkyl, aminoarylalkyl, aminoarylalkyl, aminoarylalkyl, aryloxyalkyl, aminoarylalkyl, aryloxyalkyl, aryloxyamino, aryloxyaminoalkyl, aryloxyarbonyl, aryloxysulfonyl, benzimidazole, benzo[b]furan, benzo[b]thiophene, C-amido, carbonylarylamino, carbonylarylcarbonyl, carbonylaryloxy, chromene, cycloalkylene, furan, haloalkyl, imidazole, imidazolidine, imidazoline, indole, isothiazole, isoxazole, morpholine, oxadiazole, oxazole, oxirane, parathiazine, phenothiazine, piperazine, piperidine, purine, pyran, pyrazine, pyrazole, pyrazolidine, pyrimidine, pyridine, pyrrole, pyrrolidine, quinoline, sulfonamido, sulfonylarylamino, sulfonylaryloxy, sulfonylarylsulfonyl, thiadiazole, thiazole, thiophene, triazine, triazole, unsubstituted azeridine, ureido, which may be substituted or unsubstituted.

17. The pharmaceutical composition of claim 16 wherein:

Q is CF₃SO₂ or CF₃SO₂NH;

each R1 is independently CF3, (C=O)OR, (C=O)R5, H, halo, NHR, NH(C=O)OR, NH(C=O)R5, NHSO2R5, NO2, O(C=O)R, OH, OR, SO2R5 or tetrazole;

each R2 is independently (C=O)OR, (C=O)R5, NH(C=O)OR, NH(C=O)R5, NHR,

NHSO2R5, NO2, SO2R5, -R6-(C=O)OR, -R6-NRR3, -R6-tetrazole or tetrazole; each n is independently from 0 to 2;

ring B is phenyl or heteroaryl which may be substituted or unsubstituted; and linkage A1 is C2-C4 alkoxy, C2-C4 alkoxyalkyl, C2-C4 alkylenedioxy, C2-C4 alkylenedioxy, C2-C4 alkylenediamine, C3-C4 C-amido, C3-C4 N-amido, C3-C4 ureido, C1-C3 N-sulfonamido, C2-C3 S-sulfonamido, aryldioxy, aryldiamine, aryl, alkylarylalkyl, imidazole, oxazole, oxadiazole, pyrazole, pyrazolidine, pyrrole or triazole.

18. The pharmaceutical composition of claim 17 wherein the compound has the formula:

25

5

10

$$(R^1)_n$$

$$(R^2)_n$$

 (Γ)

5

15

20

or a pharmaceutically acceptable salt or solvate thereof, wherein:

Q is CF₃SO₂ or CF₃SO₂NH;

each R1 is independently H, NHR, NO2 or OR;

each R2 is independently (C=O)OR, or NHSO2R5 or SO2R5;

each n is independently from 0 to 2; and

the linkage A1 is alkylarylalkyl, C2-C4 alkoxyalkyl, C2-C4 alkylenedioxy, aryl, aryldiamine, aryldioxy or oxadiazole.

19. The pharmaceutical composition of claim 16 wherein the compound is:

Bis(4-Trifluoromethylsulfonylbenzyl) ether;

4-Trifluoromethylsulfonylbenzyl 4-trifluoromethylsulfonylphenyl ether;

N,N-Bis(4-triluoromethylsulfonylbenzyl)benzamide;

1,2-Bis(4-trifluoromethylsullfonylphenyl)ethane;

 $N\hbox{-}(4\hbox{-}Trifluoromethyl sulfonyl benzyl)\hbox{-}4\hbox{-}trifluoromethyl sulfonyl benzamide};$

N-(4-Trifluoromethylsulfonylbenzyl)benzamide;

3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;

[3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-phenyl]-acetic acid methyl ester;

3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;

1,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-cyclopentane;

4-Methyl-2,6-bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;

4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid methyl ester;

4-[3-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;

25 1-(3,5-Bis-trifluoromethyl-phenyl)-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-1*H*-pyrazole-3-carboxylic acid methyl ester;

{4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy}acetic acid ethyl ester; 4-[3-(4-Trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid; {4-[4-(4-Trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid ethyl ester; N-(3-Trifluoromethanesulfonyl-phenyl)-2-{2-[(3-trifluoromethanesulfonylphenylcarbamoyl)-methyll-phenyl}-acetamide; N-(3-Trifluoromethanesulfonyl-phenyl)-2-{3-[(3-trifluoromethanesulfonylphenylcarbamoyl)-methyl]-phenyl}-acetamide; N-(3-Trifluoromethanesulfonyl-phenyl)-2-{4-[(3-trifluoromethanesulfonylphenylcarbamoyl)-methyl]-phenyl}-acetamide; 3,6-Bis-(morpholin-4-ylmethyl)-2,5-bis-(2-nitro-4-trifluoromethanesulfonylphenoxy)-benzene; [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-dimethyl-amine; N-(2-Ethylamino-5-trifluoromethanesulfonyl-phenyl)-2-(4-methanesulfonyl-phenyl)acetamide; 2-Hydroxy-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester; {2-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid; {3-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid; {4-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid; 3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzamide; 3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid; N-(4-Trifluoromethanesulfonyl-phenyl)-2-{2-[(4-trifluoromethanesulfonylphenylcarbamoyl)-methyl]-phenyl}-acetamide; N-(4-Trifluoromethanesulfonyl-phenyl)-2-{3-[(4-trifluoromethanesulfonylphenylcarbamoyl)-methyl]-phenyl}-acetamide;

5

10

15

20

- $N=(4-\text{Trifluoromethanesulfonyl-phenyl})-2-\{4-[(4-\text{trifluoromethanesulfonyl-phenyl})-2-[(4-\text{trifluoromethanesulfonyl-phenyl$ phenylcarbamoyl)-methyl]-phenyl}-acetamide;
- 30 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid methyl ester;

- 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid;
- 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-pyridin-4-yl-benzamide;
- 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(4-methoxy-phenyl)-benzamide;

- 3-[4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoylamino]-benzoic acid ethyl ester;
- 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(2-pyrrolidin-1-yl-ethyl)-benzamide;
- N-Ethyl-4-(1-ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzamide; 1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazole-2-carboxylic acid;
 - [2-(Benzoyl-butyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid methyl ester;
 - *N*-Benzyl-*N*-[butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-benzamide;
 - *N*-[Butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-*N*-(2-hydroxyethyl)-benzamide;
 - [2-(Acetyl-cyclopropyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
- 20 [2-(Acetyl-methyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
 - [2-(Benzoyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
- N-Cyclohexyl-N-[(2,6-dimethyl-phenylcarbamoyl)-(4-trifluoromethanesulfonyl-phenyl)-methyl]-benzamide;
 - [2-(Acetyl-propyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
 - [2-(Acetyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
- 30 {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}acetic acid;

```
4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid;
             2,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester;
             1-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-piperidine;
             4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-morpholine;
 5
             [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(2-nitro-phenyl)-
      amine;
             1-(2-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-
      ol;
             [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(4-nitro-phenyl)-
10
      amine;
             1-(4-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-
      ol;
             4-[2-Hydroxy-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-
      benzenesulfonamide; or
             4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-
15
      benzenesulfonamide.
             20.
                    The pharmaceutical composition of claim 16 wherein the compound is:
             1,2-Bis(4-trifluoromethylsulfonamidophenyl)ethane;
20
             1,2-Bis(2-methyl-4-trifluoromethylsulfonamidophenyl)ethane;
             1,3-Bis(4-trifluoromethylsulfonamidophenoxy)-2,2-dimethylpropane;
             1,3-Bis(4-trifluoromethylsulfonamidophenoxy)propane;
             1,4-Bis(4-trifluoromethylsulfonamidophenoxy)butane;
             1,4-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;
25
             1-(4-Aminophenoxy)-4-trifluoromethylsulfonamidophenoxy benzene;
             Bis(4-trifluoromethylsulfonamidophenyl) ether;
             1,3-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;
             2,5-Bis(4-trifluoromethylsulfonamidophenyl)-(1,3,4)oxadiazole;
             Bis(4-trifluoromethylsulfonamidophenyl)-1,4-diisopropylbenzene;
30
             5-Trifluoromethanesulfonylamino-1H-indole-2-carboxylic acid:
             1-Methyl-5-trifluoromethanesulfonylamino-1H-indole-2-carboxylic acid;
```

- (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid;
- 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide;
- 5-Trifluoromethanesulfonylamino-1H-indole-2-carboxylic acid phenylamide;
- 3-[(1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;
 - 3-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;
 - 4-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;
- 4-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic acid;
- 3-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic acid;
 - 4-{[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-methyl}-benzoic acid;
 - (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid tert-butyl ester;
 - 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
 - 6-Trifluoromethanesulfonylamino-naphthalene-2-carboxylic acid;
 - *N,N*-Bis[(6-carboxyl-naphthalen-2-yl)methyl] trifluoromethanesulfonamide;
 - 6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carboxylic acid;
 - 3-({6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carbonyl}-
- amino)-benzoic acid;

- 1-tert-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1H-indole-2-carboxylic acid ethyl ester;
- 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
- 25 1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;
 - 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;
 - 1-Carboxymethyl-5-(*N*,*N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid ethyl ester;
- 30 1-*tert*-Butoxycarbonylmethyl-5-(*N*,*N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid ethyl ester;

1-Carboxymethyl-5-(*N*,*N*- ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid;

- 1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
- 5 1-Benzyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; or 1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid.
- 21. A method for treating a protein tyrosine phosphatase signal transduction associated disorder in a mammal which comprises a administering to the mammal therapeutically effective amount of a compound having the formula:

$$(R^{1})_{n}$$

$$(R^{2})_{n}$$

or a pharmaceutically acceptable salt or solvate thereof, wherein:

15

20

Q is CF_3SO_2 , $CF_3SO_2NR^3$, $CF_3SO_2R^4$ or $CF_3SO_2N(R^3)R^4$, wherein R^3 is H, alkoxy, acyl or C_1 - C_3 alkyl, each of which may be substituted or unsubstituted, and R^4 is methylene which may be substituted or unsubstituted;

each R1 is independently C1-C3 alkyl, C1-C3 haloalkyl, CN, (C=O)OR, (C=O)R5, H, halo, NHR, NH(C=O)OR, NH(C=O)R5, NO2, NHSO2R5, O(C=O)R, OH, OR, SO2R5, R4SO2CF3 or tetrazole, wherein R5 is CF3, C1-C3 alkyl, NHR and wherein R is H, C1-C3 alkyl, aryl or heteroaryl, which may be substituted or unsubstituted;

each R2 is independently C1-C3 alkyl, C1-C3 haloalkyl, CN, (C=O)OR, (C=O)R5, H, halo, O(C=O)R, OR, OH, NHR, NH(C=O)OR, NH(C=O)R5, NO2, NHSO2R5, SO2R5,

tetrazole, or X1-R6-X2, wherein X1 may be present or absent and if present is O, N, (C=O), (C=O)NH, NH(C=O), SO2NH, NHSO2, R6 is C1-3 alkylene which may be substituted or unsubstituted and X2 is CF3, (C=O)OR, (C=O)R5, H, NH(C=O)R5, NH(C=O)OR, NHSO2R5, NRR3, O(C=O)R, OR, SO2R5, tetrazole;

each n is independently from 0 to 3;

5

30

ring B is an aryl, carbocyclic, heteroaryl, heterocyclic or phenyl ring which may be substituted or unsubstituted;

A1 is a linkage in which the shortest path is 2-8 atoms in length wherein the atoms in the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with a single nitrogen, oxygen or sulfur, or combination of nitrogen, oxygen and sulfur; the linkage 10 may be or may contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which may be directly in the linkage or appended to the linkage; the linkage may be acylalkyl, alkenylene, alkoxy, alkoxyalkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl, alkoxyarylamino, alkoxyaryloxyalkyl, alkylamino, alkylaminoalkyl, 15 alkylaminoarylaminoalkyl, alkylaryl, alkylarylalkyl, alkylarylamino, alkylaryloxy, alkylene, alkylenediamine, alkylenedioxy, alkyloxy, alkyloxyaryl, alkyloxyarylalkyloxy, alkyloxyaryloxyalkyl, alkylsulfonylamino, alkylthio, alkylthioalkyl, alkynylene, Nsulfonamido, N-amido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl, aminoalkylarylalkylamino, aminoalkylaryloxy, aminoalkyloxy, aminoaryl, aminoarylalkyl, 20 aminoarylcarbonyl, aminoaryloxy, aminoaryloxyalkyl, aminoarylsulfonyl, aryl, arylamino, aryldioxy, aryldiamine, aryloxy, aryloxyalkyl, aryloxyamino, aryloxyaminoalkyl, aryloxycarbonyl, aryloxysulfonyl, benzimidazole, benzo[b]furan, benzo[b]thiophene, Camido, carbonylarylamino, carbonylarylcarbonyl, carbonylaryloxy, chromene, cycloalkylene, disulfide, furan, haloalkyl, imidazole, imidazolidine, imidazoline, indole, isothiazole, 25 isoxazole, morpholine, oxadiazole, oxazole, oxirane, parathiazine, phenothiazine, piperazine, piperidine, purine, pyran, pyrazine, pyrazole, pyrazolidine, pyrimidine, pyridine, pyrrole, pyrrolidine, quinoline, sulfonamido, sulfonylalkyl, sulfonylarylamino, sulfonylaryloxy, sulfonylarylsulfonyl, thiadiazole, thiazole, thiophene, triazine, triazole, unsubstituted azeridine, ureido, which may be substituted or unsubstituted:

A² is a linkage in which the shortest path is 0-6 atoms in length wherein the atoms in the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with

a single nitrogen, oxygen or sulfur, or combination of nitrogen, oxygen and sulfur; the linkage may be or may contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which may be directly in the linkage or appended to the linkage; the linkage may be single atom C. O, S or N which may be substituted or unsubstituted; the linkage may be acylalkyl, alkenylene, alkoxy, alkoxyalkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl, 5 alkoxyarylamino, alkoxyaryloxyalkyl, alkylamino, alkylaminoalkyl, alkylaminoarylaminoalkyl, alkylaryl, alkylarylalkyl, alkylarylamino, alkylaryloxy, alkylene, alkylenediamine, alkylenedioxy, alkyloxy, alkyloxyaryl, alkyloxyarylalkyloxy, alkyloxyaryloxyalkyl, alkylsulfonylamino, alkylthio, alkylthioalkyl, alkynylene, N-10 sulfonamido, N-amido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl, aminoalkylarylalkylamino, aminoalkylaryloxy, aminoalkyloxy, aminoaryl, aminoarylalkyl, aminoarylcarbonyl, aminoaryloxy, aminoaryloxyalkyl, aminoarylsulfonyl, aryl, arylamino, ortho or para aryldioxy, substituted meta-aryldioxy, aryldiamine, aryloxy, aryloxyalkyl, aryloxyamino, aryloxyaminoalkyl, aryloxycarbonyl, aryloxysulfonyl, benzimidazole, 15 benzo[b]furan, benzo[b]thiophene, C-amido, carbonylarylamino, carbonylarylcarbonyl, carbonylaryloxy, chromene, cycloalkylene, disulfide, furan, haloalkyl, imidazole, imidazolidine, imidazoline, indole, isothiazole, isoxazole, morpholine, oxadiazole, oxazole, oxirane, parathiazine, phenothiazine, piperazine, piperidine, purine, pyran, pyrazine, pyrazole, pyrazolidine, pyrimidine, pyridine, pyrrole, pyrrolidine, quinoline, sulfonamido, 20 sulfonylalkyl, sulfonylarylamino, sulfonylaryloxy, sulfonylarylsulfonyl, thiadiazole, thiazole, thiophene, triazine, triazole, unsubstituted azeridine, ureido, which may be substituted or unsubstituted and a pharmaceutically acceptable carrier or excipient:

wherein said compound regulates, inhibits or modulates protein tyrosine phosphatase signal transduction.

25

30

22. The method of claim 21 wherein the protein tyrosine phosphatase signal transduction is associated with cancer, a solid tumor, glioma, melanoma, Kaposi's sarcoma, hemangioma, ovarian cancer, breast cancer, lung cancer, pancreatic cancer, liver cancer, prostate cancer, colon cancer, or epidermoid cancer.

- 23. The method of claim 21 wherein the protein tyrosine phosphatase signal transduction is associated with diabetes.
- The method of claim 21 wherein the protein tyrosine phosphatase signal
 transduction is associated with neurological degenerative diseases.
 - 25. The method of claim 21 wherein the protein tyrosine phosphatase signal transduction is associated with osteoporosis.
- The method of claim 21, 22, 23, 24 or 25 wherein the mammal is a human.
 - 27. The method of claim 21 wherein Q is CF₃SO₂.
 - 28. The method of claim 21 wherein Q is CF₃SO₂NR³.
 - 29. The method of claim 21 wherein Q is CF₃SO₂R⁴.

- 30. The method of claim 21 wherein Q is CF₃SO₂N(R³)R⁴.
- 20 31. The method of claim 21 wherein the compound has formula I.
 - 32. The method of claim 21 wherein the compound has formula II.
 - 33. The method of claim 21 wherein the compound has formula III.
 - 34. The method of claim 21 wherein R² is SO₂R⁵, NHSO₂R⁵ or CF₃SO₂R⁴.
 - 35. The method of claim 21 wherein

 Q is CF₃SO₂ or CF₃SO₂NH;

 each R1 is independently CF3, (C=O)OR, (C=O)R5, H, halo, NHR, NH(C=O)C
- each R1 is independently CF3, (C=O)OR, (C=O)R5, H, halo, NHR, NH(C=O)OR, NH(C=O)R5, NHSO2R5, NO2, O(C=O)R, OH, OR, SO2R5 or tetrazole;

each R2 is independently (C=O)OR, (C=O)R5, NH(C=O)OR, NH(C=O)R5, NHR, NHSO2R5, NO2, SO2R5, -R6-(C=O)OR, -R6-NRR3, -R6-tetrazole or tetrazole; each n is independently from 0 to 2;

ring B is phenyl or heteroaryl which may be substituted or unsubstituted; and linkage A1 is C1-C4 alkoxy, C2-C4 alkoxyalkyl, C2-C4 alkylenedioxy, C2-C4 alkylenedioxy, C2-C4 alkylenediamine, C1-C4 C-amido, C1-C4 N-amido, C1-C4 ureido, C0-C3 N-sulfonamido, C0-C3 S-sulfonamido, aryldioxy, aryldiamine, aryl, alkylarylalkyl, imidazole, oxazole, oxadiazole, pyrazole, pyrazolidine, pyrrole or triazole.

36. The method of claim 21 wherein the compound has the formula:

$$R^1$$
 A^1
 R^2

10

(IV)

or a pharmaceutically acceptable salt or solvate thereof, wherein:

Q is CF₃SO₂ or CF₃SO₂NH;

15 R1 is H or NO2;

R2 is (C=O)OR, NHSO2R5 or SO2R5; and

the linkage A1 is C2-C4 alkoxyalkyl, aryldioxy, aryl, alkylarylalkyl, C1-C4 N-amido or oxadiazole.

20 37. The method of claim 21 wherein the compound is:

Bis(4-Trifluoromethylsulfonylbenzyl) ether;

4-Trifluoromethylsulfonylbenzyl 4-trifluoromethylsulfonylphenyl ether;

N,N-Bis(4-triluoromethylsulfonylbenzyl)benzamide;

1,2-Bis(4-trifluoromethylsullfonylphenyl)ethane;

N-(4-Trifluoromethylsulfonylbenzyl)-4-trifluoromethylsulfonylbenzamide;

N-(4-Trifluoromethylsulfonylbenzyl)benzamide;

Bis(4-Trifluoromethylsulfonylphenyl) disulfide;

Bis-(2-Nitro-4-trifluoromethylsulfonylphenyl) disulfide: 3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester: [3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-phenyll-acetic acid methyl ester; 3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester; 5 1.3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-cyclopentane: 4-Methyl-2,6-bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester; 4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid methyl ester; 10 4-[3-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-phenoxyl-benzoic acid; 1-(3.5-Bis-trifluoromethyl-phenyl)-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-1H-pyrazole-3-carboxylic acid methyl ester; {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy}-benzenesulfonyl]-phenoxy}acetic acid ethyl ester; 4-[3-(4-Trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid; 15 {4-[4-(4-Trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid ethyl ester; N-(3-Trifluoromethanesulfonyl-phenyl)-2-{2-[(3-trifluoromethanesulfonylphenylcarbamoyl)-methyl]-phenyl}-acetamide; N-(3-Trifluoromethanesulfonyl-phenyl)-2-{3-[(3-trifluoromethanesulfonyl-20 phenylcarbamoyl)-methyl]-phenyl}-acetamide; N-(3-Trifluoromethanesulfonyl-phenyl)-2-{4-[(3-trifluoromethanesulfonylphenylcarbamoyl)-methyl]-phenyl}-acetamide; 3,6-Bis-(morpholin-4-ylmethyl)-2,5-bis-(2-nitro-4-trifluoromethanesulfonyl-25 phenoxy)-benzene; [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-dimethyl-amine; N-(2-Ethylamino-5-trifluoromethanesulfonyl-phenyl)-2-(4-methanesulfonyl-phenyl)acetamide; 2-Hydroxy-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl 30 ester;

{2-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;

- {3-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;
- {4-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;
- 3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzamide;
- 3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid;

10

15

- N-(4-Trifluoromethanesulfonyl-phenyl)-2-{2-[(4-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;
- *N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{3-[(4-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;
- *N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{4-[(4-trifluoromethanesulfonyl-phenyl-acetamide;
- 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid methyl ester;
 - 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid;
- 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-pyridin-4-yl-benzamide;
- 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(4-methoxyphenyl)-benzamide;
- 3-[4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoylamino]-benzoic acid ethyl ester;
- 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(2-pyrrolidin-1-yl-ethyl)-benzamide;
 - *N*-Ethyl-4-(1-ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzamide; 1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazole-2-carboxylic acid;
 - [2-(Benzoyl-butyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid methyl ester;
 - *N*-Benzyl-*N*-[butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-benzamide;
 - N-[Butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-N-(2-hydroxyethyl)-benzamide;
- 30 [2-(Acetyl-cyclopropyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;

[2-(Acetyl-methyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester; [2-(Benzoyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]acetic acid ethyl ester; 5 N-Cyclohexyl-N-[(2,6-dimethyl-phenylcarbamoyl)-(4-trifluoromethanesulfonylphenyl)-methyll-benzamide; [2-(Acetyl-propyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester; [2-(Acetyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]acetic acid ethyl ester; {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy}acetic acid; 4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid; 2,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester; 1-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-piperidine; 4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-morpholine; [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(2-nitro-phenyl)amine; 1-(2-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-20 ol; [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(4-nitro-phenyl)amine; 1-(4-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2ol; 4-[2-Hydroxy-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]benzenesulfonamide; 4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]benzenesulfonamide; or Bis-{[4-(2-nitro-4-trifluoromethanesulfonyl)-phenoxy]-phenyl} sulfone.

10

15

25

30

38. The method of claim 21 wherein the compound is:

1,2-Bis(4-trifluoromethylsulfonamidophenyl)ethane; 1,2-Bis(2-methyl-4-trifluoromethylsulfonamidophenyl)ethane; 1.3-Bis(4-trifluoromethylsulfonamidophenoxy)-2,2-dimethylpropane: 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)propane; 5 1,4-Bis(4-trifluoromethylsulfonamidophenoxy)butane; 1,4-Bis(4-trifluoromethylsulfonamidophenoxy)benzene; 1-(4-Aminophenoxy)-4-trifluoromethylsulfonamidophenoxy benzene; Bis(4-trifluoromethylsulfonamidophenyl) ether; 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)benzene; 2,5-Bis(4-trifluoromethylsulfonamidophenyl)-(1,3,4)oxadiazole; 10 Bis(4-trifluoromethylsulfonamidophenyl)-1,4-diisopropylbenzene; 5-Trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid; 15 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide; 5-Trifluoromethanesulfonylamino-1H-indole-2-carboxylic acid phenylamide; 3-[(1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino] benzoic acid; 3-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid; 4-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid; 20 4-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic acid; 3-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic acid; 4-{[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-methyl}-25 benzoic acid; (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid tert-butyl ester; 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester; 6-Trifluoromethanesulfonylamino-naphthalene-2-carboxylic acid; N, N-Bis[(6-carboxyl-naphthalen-2-yl)methyl] trifluoromethanesulfonamide; 30 6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carboxylic acid;

- 3-({6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carbonyl}-amino)-benzoic acid;
- 1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
- 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
 - 1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;
 - 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;
 - 1-Carboxymethyl-5-(*N*,*N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid ethyl ester;
 - 1-*tert*-Butoxycarbonylmethyl-5-(*N*,*N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid ethyl ester;
- 1-Carboxymethyl-5-(*N*,*N* ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid;
 - 1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
 - 1-Benzyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; or
 - $1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1 \emph{H-} indole-2-carboxylic acid.$
 - 39. A method for treating, alleviating or preventing cancer in a mammal which comprises administering to a mammal in need thereof a therapeutically effective amount of a compound having the formula:

5

10

$$(R^{1})_{n}$$

$$(R^{2})_{n}$$

or a pharmaceutically acceptable salt or solvate thereof, wherein:

Q is CF_3SO_2 , $CF_3SO_2NR^3$, $CF_3SO_2R^4$ or $CF_3SO_2N(R^3)R^4$, wherein R^3 is H, alkoxy, acyl or C_1 - C_3 alkyl, each of which may be substituted or unsubstituted, and R^4 is methylene which may be substituted or unsubstituted;

each R1 is independently C1-C3 alkyl, C1-C3 haloalkyl, CN, (C=O)OR, (C=O)R5, H, halo, NHR, NH(C=O)OR, NH(C=O)R5, NO2, NHSO2R5, O(C=O)R, OR, OH, SO2R5, R4SO2CF3 or tetrazole, wherein R5 is CF3, C1-C3 alkyl, NHR and wherein R is H, C1-C3 alkyl, aryl or heteroaryl, which may be substituted or unsubstituted;

each R2 is independently C1-3 alkyl, C1-C3 haloalkyl, CN, (C=O)OR, (C=O)R5, H, halo, O(C=O)R, OR, OH, NHR, NH(C=O)OR, NH(C=O)R5, NO2, NHSO2R5, SO2R5, tetrazole or X1-R6-X2, wherein X1 may be present or absent and if present is O, N, (C=O), (C=O)NH, NH(C=O), SO2NH, NHSO2, R6 is C1-3 alkylene which may be substituted or unsubstituted and X2 is CF3, (C=O)OR, (C=O)R5, H, NH(C=O)R5, NH(C=O)OR, NHSO2R5, NRR3, O(C=O)R, OR, SO2R5, tetrazole;

each n is independently from 0 to 3;

5

10

15

20

ring B is an aryl, carbocyclic, heteroaryl, heterocyclic or phenyl ring which may be substituted or unsubstituted;

A1 is a linkage in which the shortest path is 2-8 atoms in length wherein the atoms in the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with a single nitrogen, oxygen, sulfur, or combination of nitrogen, oxygen and sulfur; the linkage may be or contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which may be directly in the linkage or appended to the linkage; the linkage may be acylalkyl,

alkenylene, alkoxy, alkoxyalkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl, alkoxyarylamino, alkoxyaryloxyalkyl, alkylamino, alkylaminoalkyl, alkylaminoarylaminoalkyl, alkylaryl, alkylarylalkyl, alkylarylamino, alkylaryloxy, alkylene. alkylenediamine, alkylenedioxy, alkyloxy, alkyloxyaryl, alkyloxyarylalkyoxy, alkyloxyaryloxyalkyl, alkylsulfonylamino, alkylthio, alkylthioalkyl, alkynylene, N-5 sulfonamido, N-amido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl, aminoalkylarylalkylamino, aminoalkylaryloxy, aminoalkyloxy, aminoaryl, aminoarylalkyl, aminoarylcarbonyl, aminoaryloxy, aminoaryloxyalkyl, aminoarylsulfonyl, aryl, arylamino, aryldioxy, aryldiamine, aryloxy, aryloxyalkyl, aryloxyamino, aryloxyaminoalkyl, aryloxycarbonyl, aryloxysulfonyl, benzimidazole, benzo[b]furan, benzo[b]thiophene, C-10 amido, carbonylarylamino, carbonylarylcarbonyl, carbonylaryloxy, chromene, cycloalkylene, disulfide, furan, haloalkyl, imidazole, imidazolidine, imidazoline, indole, isothiazole, isoxazole, morpholine, oxadiazole, oxazole, oxirane, parathiazine, phenothiazine, piperazine, piperidine, purine, pyran, pyrazine, pyrazole, pyrazolidine, pyrimidine, pyridine, pyrrole, 15 pyrrolidine, quinoline, sulfonamido, sulfonylakyl, sulfonylarylamino, sulfonylaryloxy, sulfonylarylsulfonyl, thiadiazole, thiazole, thiophene, triazine, triazole, unsubstituted azeridine, or ureido which may be substituted or unsubstituted;

A² is a linkage in which the shortest path is 0-6 atoms in length wherein the atoms in the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with a single nitrogen, oxygen or sulfur, or combination of nitrogen, oxygen and sulfur; the linkage may be or may contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which may be directly in the linkage or appended to the linkage; the linkage may be single atom C, O, S or N which may be substituted or unsubstituted; the linkage may be acylalkyl, alkenylene, alkoxy, alkoxyalkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl, alkoxyarylamino, alkoxyarylalkyl, alkylaminoalkyl, alkylaminoalkyl, alkylarylamino, alkylaryloxy, alkyloxy, alkyloxyarylalkyloxy, alkyloxyaryloxyalkyl, alkylsulfonylamino, alkylthio, alkylthioalkyl, alkynylene, N-sulfonamido, N-amido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl, aminoarylalkyl, aminoarylalkyl, aminoarylalkyl, aminoarylalkyl, aminoarylalkyl, aminoarylalkyl, aminoarylalkyl, aryl, arylamino,

20

25

ortho or para aryldioxy, substituted meta-aryldioxy, aryldiamine, aryloxy, aryloxyalkyl, aryloxyamino, aryloxyaminoalkyl, aryloxycarbonyl, aryloxysulfonyl, benzimidazole, benzo[b]furan, benzo[b]thiophene, C-amido, carbonylarylamino, carbonylarylcarbonyl, carbonylaryloxy, chromene, cycloalkylene, furan, haloalkyl, imidazole, imidazolidine, imidazoline, indole, isothiazole, isoxazole, morpholine, oxadiazole, oxazole, oxirane, parathiazine, phenothiazine, piperazine, piperidine, purine, pyran, pyrazine, pyrazole, pyrazolidine, pyrimidine, pyridine, pyrrole, pyrrolidine, quinoline, sulfonamido, sulfonylarylamino, sulfonylaryloxy, sulfonylarylsulfonyl, thiadiazole, thiazole, thiophene, triazine, triazole, unsubstituted azeridine, ureido, which may be substituted or unsubstituted;

and a pharmaceutically acceptable carrier or excipient.

- 40. The method of claim 39 wherein the mammal is a human.
- 15 41. The method of claim 39 wherein Q is CF₃SO₂ or CF₃SO₂NH;

5

10

20

25

each R1 is independently CF3, (C=O)OR, (C=O)R5, H, halo, NHR, NH(C=O)OR, NH(C=O)R5, NHSO2R5, NO2, O(C=O)R, OH, OR, SO2R5 or tetrazole; each R2 is independently (C=O)OR, (C=O)R5, NH(C=O)OR, NH(C=O)R5, NHR,

NHSO2R5, NO2, SO2R5, -R6-(C=O)OR, -R6-NRR3, -R6-tetrazole or tetrazole; each n is independently from 0 to 2;

ring B is phenyl or heteroaryl which may be substituted or unsubstituted; and linkage A1 is C1-C4 alkoxy, C2-C4 alkoxyalkyl, C2-C4 alkylenedioxy, C2-C4 alkylenedioxy, C2-C4 alkylenediamine, C1-C4 C-amido, C1-C4 N-amido, C1-C4 ureido, C0-C3 N-sulfonamido, C0-C3 S-sulfonamido, aryldioxy, aryldiamine, aryl, alkylarylalkyl, imidazole, oxazole, oxadiazole, pyrazole, pyrazolidine, pyrrole or triazole.

42. The method of claim 39 wherein the compound has the formula:

(IV)

or a pharmaceutically acceptable salt or solvate thereof, wherein:

Q is CF₃SO₂ or CF₃SO₂NH;

R1 is H or NO2;

5

10

25

R2 is (C=O)OR, NHSO2R5 or SO2R5; and

the linkage A1 is C2-C4 alkoxyalkyl, aryldioxy, aryl, alkylarylalkyl, C1-C4 N-amido or oxadiazole.

43. The method of claim 39 wherein the compound is:

Bis(4-Trifluoromethylsulfonylbenzyl) ether;

4-Trifluoromethylsulfonylbenzyl 4-trifluoromethylsulfonylphenyl ether;

N,N-Bis(4-triluoromethylsulfonylbenzyl)benzamide;

1,2-Bis(4-trifluoromethylsullfonylphenyl)ethane;

N-(4-Trifluoromethylsulfonylbenzyl)-4-trifluoromethylsulfonylbenzamide;

N-(4-Trifluoromethylsulfonylbenzyl)benzamide;

Bis(4-Trifluoromethylsulfonylphenyl) disulfide;

Bis-(2-Nitro-4-trifluoromethylsulfonylphenyl) disulfide;

3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;

[3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-phenyl]-acetic acid methyl ester:

3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;

1,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-cyclopentane;

4-Methyl-2,6-bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;

4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid methyl ester;

4-[3-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;

1-(3,5-Bis-trifluoromethyl-phenyl)-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-1*H*-pyrazole-3-carboxylic acid methyl ester;

{4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy}-benzenesulfonyl]-phenoxy}acetic acid ethyl ester; 4-[3-(4-Trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid; {4-[4-(4-Trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid ethyl ester; N-(3-Trifluoromethanesulfonyl-phenyl)-2-{2-[(3-trifluoromethanesulfonylphenylcarbamoyl)-methyl]-phenyl}-acetamide; N-(3-Trifluoromethanesulfonyl-phenyl)-2-{3-[(3-trifluoromethanesulfonylphenylcarbamoyl)-methyl]-phenyl}-acetamide; N-(3-Trifluoromethanesulfonyl-phenyl)-2-{4-[(3-trifluoromethanesulfonylphenylcarbamoyl)-methyl]-phenyl}-acetamide; 3,6-Bis-(morpholin-4-ylmethyl)-2,5-bis-(2-nitro-4-trifluoromethanesulfonylphenoxy)-benzene; [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-dimethyl-amine; N-(2-Ethylamino-5-trifluoromethanesulfonyl-phenyl)-2-(4-methanesulfonyl-phenyl)acetamide; 2-Hydroxy-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester; {2-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid; {3-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid; {4-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid; 3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzamide; 3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid; N-(4-Trifluoromethanesulfonyl-phenyl)-2-{2-[(4-trifluoromethanesulfonylphenylcarbamoyl)-methyl]-phenyl}-acetamide; N-(4-Trifluoromethanesulfonyl-phenyl)-2-{3-[(4-trifluoromethanesulfonylphenylcarbamoyl)-methyl]-phenyl}-acetamide; N-(4-Trifluoromethanesulfonyl-phenyl)-2-{4-[(4-trifluoromethanesulfonylphenylcarbamoyl)-methyl]-phenyl}-acetamide; 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid methyl

5

10

15

20

25

30

ester;

- 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid;
- 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-pyridin-4-yl-benzamide;
- 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(4-methoxy-phenyl)-benzamide;

15

- 3-[4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoylamino]-benzoic acid ethyl ester;
- 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(2-pyrrolidin-1-yl-ethyl)-benzamide;
- N-Ethyl-4-(1-ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzamide; 1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazole-2-carboxylic acid;
 - [2-(Benzoyl-butyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid methyl ester;
 - *N*-Benzyl-*N*-[butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-benzamide;
 - *N*-[Butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-*N*-(2-hydroxy-ethyl)-benzamide;
 - [2-(Acetyl-cyclopropyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
- 20 [2-(Acetyl-methyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
 - [2-(Benzoyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
 - *N*-Cyclohexyl-*N*-[(2,6-dimethyl-phenylcarbamoyl)-(4-trifluoromethanesulfonyl-phenyl)-methyl]-benzamide;
 - [2-(Acetyl-propyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
 - [2-(Acetyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
- 30 {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}acetic acid;

```
4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid:
             2,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester:
             1-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-piperidine;
             4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-morpholine;
             [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(2-nitro-phenyl)-
 5
      amine;
             1-(2-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-
     ol;
             [2.3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(4-nitro-phenyl)-
10
      amine;
             1-(4-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-
     ol;
             4-[2-Hydroxy-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylaminol-
     benzenesulfonamide;
            4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-
15
      benzenesulfonamide; or
            Bis-{[4-(2-nitro-4-trifluoromethanesulfonyl)-phenoxy]-phenyl} sulfone.
             44.
                    The method of claim 39 wherein the compound is:
20
             1,2-Bis(4-trifluoromethylsulfonamidophenyl)ethane;
             1,2-Bis(2-methyl-4-trifluoromethylsulfonamidophenyl)ethane;
             1,3-Bis(4-trifluoromethylsulfonamidophenoxy)-2,2-dimethylpropane;
             1,3-Bis(4-trifluoromethylsulfonamidophenoxy)propane;
             1,4-Bis(4-trifluoromethylsulfonamidophenoxy)butane;
25
             1,4-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;
             1-(4-Aminophenoxy)-4-trifluoromethylsulfonamidophenoxy benzene;
            Bis(4-trifluoromethylsulfonamidophenyl) ether;
             1,3-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;
            2,5-Bis(4-trifluoromethylsulfonamidophenyl)-(1,3,4)oxadiazole;
            Bis(4-trifluoromethylsulfonamidophenyl)-1,4-diisopropylbenzene;
30
            5-Trifluoromethanesulfonylamino-1H-indole-2-carboxylic acid;
```

(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid; 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide; 5-Trifluoromethanesulfonylamino-1H-indole-2-carboxylic acid phenylamide; 5 3-[(1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]benzoic acid; 3-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-aminol-benzoic acid; 4-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid; 4-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic 10 acid; 3-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic acid; 4-{[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-methyl}benzoic acid; (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid tert-butyl ester; 15 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester; 6-Trifluoromethanesulfonylamino-naphthalene-2-carboxylic acid; N,N-Bis[(6-carboxyl-naphthalen-2-yl)methyl] trifluoromethanesulfonamide; 6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carboxylic acid; 20 3-({6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carbonyl}amino)-benzoic acid; 1-tert-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1H-indole-2carboxylic acid ethyl ester; 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl , 25 ester; 1-tert-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1H-indole-2carboxylic acid; 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; 1-Carboxymethyl-5-(N,N-ditrifluoromethanesulfonyl)amino-1H-indole-2-carboxylic 30 acid ethyl ester;

1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;

- 1-*tert*-Butoxycarbonylmethyl-5-(*N*,*N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid ethyl ester;
- 1-Carboxymethyl-5-(*N*,*N* ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid;
- 5 1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
 - 1-Benzyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; or
 - 1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid.
- The method of claim 39 wherein said cancer is a solid tumor.
 - 46. The method of claim 39 wherein said cancer is selected from the group consisting of glioma, melanoma, adenocarcinoma, Kaposi's sarcoma and hemangioma.
- The method of claim 39 wherein said cancer is selected from the group consisting of ovarian, breast, lung, pancreatic, liver, prostate, colon, testicular, and epidermoid cancer.
- 48. A method for regulating, inhibiting or modulating protein tyrosine phosphatase signal transduction in a cell which comprises a administering to the cell an effective amount of a compound having the formula:

$$(R^{1})_{n}$$

$$(R^{2})_{n}$$

or a pharmaceutically acceptable salt or solvate thereof, wherein:

Q is CF₃SO₂, CF₃SO₂NR³, CF₃SO₂R⁴ or CF₃SO₂N(R³)R⁴, wherein R³ is H, alkoxy, acyl or C₁-C₃ alkyl, each of which may be substituted or unsubstituted, and R⁴ is methylene which may be substituted or unsubstituted;

each R1 is independently C1-C3 alkyl, C1-C3 haloalkyl, CN, (C=O)OR, (C=O)R5, H, halo, NHR, NH(C=O)OR, NH(C=O)R5, NO2, NHSO2R5, O(C=O)R, OR, OH, SO2R5, R4SO2CF3 or tetrazole, wherein R5 is CF3, C1-C3 alkyl, NHR and wherein R is H, C1-C3 alkyl, aryl or heteroaryl, which may be substituted or unsubstituted;

each R2 is independently C1-C3 alkyl, C1-C3 haloalkyl, CN, (C=O)OR, (C=O)R5, H, halo, O(C=O)R, OR, OH, NHR, NH(C=O)OR, NH(C=O)R5, NO2, NHSO2R5, SO2R5, tetrazole, or X1-R6-X2 wherein X1 may be present or absent and if present is O, N, (C=O), (C=O)NH, NH(C=O), SO2NH, NHSO2, R6 is C1-3 alkylene which may be substituted or unsubstituted and X2 is CF3, (C=O)OR, (C=O)R5, H, NH(C=O)R5, NH(C=O)OR, NHSO2R5, NRR3, O(C=O)R, OR, SO2R5, tetrazole;

each n is independently from 0 to 3;

5

10

15

20

ring B is an aryl, carbocyclic, heteroaryl, heterocyclic or phenyl ring which may be substituted or unsubstituted;

Al is a linkage in which the shortest path is 2-8 atoms in length wherein the atoms in the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with a single nitrogen, oxygen or sulfur, or combination of nitrogen, oxygen and sulfur; the linkage may be or may contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which may be directly in the linkage or appended to the linkage; the linkage may be acylalkyl,

alkenylene, alkoxy, alkoxyalkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl, alkoxyarylamino, alkoxyaryloxyalkyl, alkylamino, alkylaminoalkyl, alkylaminoarylaminoalkyl, alkylaryl, alkylarylalkyl, alkylarylamino, alkylaryloxy, alkylene, alkylenediamine, alkylenedioxy, alkyloxy, alkyloxyaryl, alkyloxyarylalkyloxy, 5 alkyloxyaryloxyalkyl, alkylsulfonylamino, alkylthio, alkylthioalkyl, alkynylene, Nsulfonamido, N-amido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl, aminoalkylarylalkylamino, aminoalkylaryloxy, aminoalkyloxy, aminoaryl, aminoarylalkyl aminoarylcarbonyl, aminoaryloxy, aminoaryloxyalkyl, aminoarylsulfonyl, aryl, arylamino, aryldioxy, aryldiamine, aryloxy, aryloxyalkyl, aryloxyamino, aryloxyaminoalkyl, 10 aryloxycarbonyl, aryloxysulfonyl, benzimidazole, benzo[b]furan, benzo[b]thiophene, Camido, carbonylarylamino, carbonylarylcarbonyl, carbonylaryloxy, chromene, cycloalkylene, disulfide, furan, haloalkyl, imidazole, imidazolidine, imidazoline, indole, isothiazole, isoxazole, morpholine, oxadiazole, oxazole, oxirane, parathiazine, phenothiazine, piperazine, piperidine, purine, pyran, pyrazine, pyrazole, pyrazolidine, pyrimidine, pyridine, pyrrole, 15 pyrrolidine, quinoline, sulfonamido, sulfonylalkyl, sulfonylarylamino, sulfonylaryloxy, sulfonylarylsulfonyl, thiadiazole, thiazole, thiophene, triazine, triazole, unsubstituted azeridine, ureido, which may be substituted or unsubstituted;

A² is a linkage in which the shortest path is 0-6 atoms in length wherein the atoms in the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with a single nitrogen, oxygen or sulfur, or combination of nitrogen, oxygen and sulfur; the linkage may be or may contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which may be directly in the linkage or appended to the linkage; the linkage may be single atom C, O, S or N which may be substituted or unsubstituted; the linkage may be acylalkyl, alkenylene, alkoxy, alkoxyarkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl, alkoxyarylamino, alkoxyarylamino, alkoxyarylamino, alkylaminoalkyl, alkylaminoarylaminoalkyl, alkylaryl, alkylarylalkyl, alkylarylamino, alkylaryloxy, alkyloxy, alkyloxyarylalkyloxy, alkyloxyaryloxyalkyl, alkylsulfonylamino, alkylthio, alkylthioalkyl, alkynylene, N-sulfonamido, N-amido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl, aminoarylalkyl, aminoarylalkyl, aminoarylalkyl, aminoarylalkyl, aminoarylalkyl, aminoarylalkyl, aminoarylalkyl, aminoarylalkyl, aminoaryloxy, aminoaryloxy, aminoarylsulfonyl, aryl, arylamino,

20

25

ortho or para aryldioxy, substituted meta-aryldioxy, aryldiamine, aryloxy, aryloxyalkyl, aryloxyamino, aryloxyaminoalkyl, aryloxycarbonyl, aryloxysulfonyl, benzimidazole, benzo[b]furan, benzo[b]fhiophene, C-amido, carbonylarylamino, carbonylarylcarbonyl, carbonylaryloxy, chromene, cycloalkylene, furan, haloalkyl, imidazole, imidazolidine, imidazoline, indole, isothiazole, isoxazole, morpholine, oxadiazole, oxazole, oxirane, parathiazine, phenothiazine, piperazine, piperidine, purine, pyran, pyrazine, pyrazole, pyrazolidine, pyrimidine, pyridine, pyrrole, pyrrolidine, quinoline, sulfonamido, sulfonylarylamino, sulfonylaryloxy, sulfonylarylsulfonyl, thiadiazole, thiazole, thiophene, triazine, triazole, unsubstituted azeridine, ureido, which may be substituted or unsubstituted

wherein said compound regulates, inhibits or modulates protein tyrosine phosphatase signal transduction.

49. A method for inhibiting, regulating or modulating the activity of a phosphate binding protein in a cell which comprises contacting the cell with an effective amount of a compound with a molecular weight less than 2000 daltons, or a pharmaceutically acceptable salt or solvate thereof, wherein the compound contains at least one functional group selected from the group consisting of $C(R^{11})F_aSO_bZ$ -, and $R^{12}SO_bC(R^{11})F_m$ -:

wherein a is 1, 2 or 3 and b is 1 or 2 and m is 1 or 2;

Z is C or N;

5

10

20

25

30

wherein R^{11} is present or absent and if present is independently H, halo, C1-C4 alkyl, C_2 - C_4 alkenyl or C_1 - C_4 haloalkyl, which may be substituted or unsubstituted;

wherein R¹² is C1-C3 haloalkyl, C1-C3 alkyl which may be substituted or unsubstituted, or N which may be substituted or unsubstituted;

wherein the compound regulates, inhibits or modulates the activity of the phosphate binding protein.

50. The method of claim 49 wherein the compound has the formula $C(R^{11})F_aSO_bZR^{13}$ or $R^{12}SO_bC(R^{11})F_mR^{13}$,

wherein ZR¹³ or R¹³ is an amide, an amine, an ester, an ether, a monocyclic heterocycle, a polycyclic heterocycle, an acyclic hydrocarbon, a monocyclic aliphatic

hydrocarbon, a polycyclic aliphatic hydrocarbon, a monocyclic aromatic hydrocarbon, a polycyclic aromatic hydrocarbon, a macrocycle, a nucleoside, a nucleotide, an oligoamide, an oligoamine, an oligoester, an oligoether, an oligonucleotide, an oligosaccharide, an oligourea, an oligourethane, a peptide, a peptide oligomer, a saccharide, a steroid, a urea, a urethane, which may be substituted or unsubstituted.

- 51. The method of claim 50, wherein the compound has the formula CF₃SO₂-, CF₃SO₂N-, CF₃SO₂CO-, CF₃SO₂CO-, CF₃SO₂CN-, CF₃CF₂SO₂-or CHF₂SO₂-.
- The method of claim 51, wherein the compound is:

- 2-[4-(Difluoro-methanesulfonyl)-phenyl]-5-naphthalen-2-yl-oxazole;
- [2-Nitro-4-(1,1,2,2-tetrafluoro-ethanesulfonyl)-phenyl]-p-tolyl-amine;
- Bis(4-Trifluoromethylsulfonylbenzyl) ether;
- 4-Trifluoromethylsulfonylbenzyl 4-trifluoromethylsulfonylphenyl ether;
- 15 N,N-Bis(4-triluoromethylsulfonylbenzyl)benzamide;
 - 1,2-Bis(4-trifluoromethylsullfonylphenyl)ethane;
 - N-(4-Trifluoromethylsulfonylbenzyl)-4-trifluoromethylsulfonylbenzamide;
 - N-(4-Trifluoromethylsulfonylbenzyl)benzamide;
 - Bis(4-Trifluoromethylsulfonylphenyl) disulfide;
- 20 Bis-(2-Nitro-4-trifluoromethylsulfonylphenyl) disulfide;
 - 3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;
 - [3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-phenyl]-acetic acid methyl ester;
 - 3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;
- 25 1,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-cyclopentane;
 - 4-Methyl-2,6-bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;
 - 4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid methyl ester;
 - 4-[3-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;
- 30 1-(3,5-Bis-trifluoromethyl-phenyl)-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-1*H*-pyrazole-3-carboxylic acid methyl ester;

- {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid ethyl ester;
 - 4-[3-(4-Trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;
- {4-[4-(4-Trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid ethyl ester;
 - N-(3-Trifluoromethanesulfonyl-phenyl)-2-{2-[(3-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;
 - N-(3-Trifluoromethanesulfonyl-phenyl)-2-{3-[(3-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;
 - *N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{4-[(3-trifluoromethanesulfonyl-phenyl-acetamide;

15

20

- 3,6-Bis-(morpholin-4-ylmethyl)-2,5-bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzene;
 - [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-dimethyl-amine;
- *N*-(2-Ethylamino-5-trifluoromethanesulfonyl-phenyl)-2-(4-methanesulfonyl-phenyl)-acetamide;
- 2-Hydroxy-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester;
 - {2-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;
 - {3-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;
 - {4-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;
 - 3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzamide;
 - 3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid;
- *N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{2-[(4-trifluoromethanesulfonyl-phenyl-acetamide;
- *N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{3-[(4-trifluoromethanesulfonyl-phenyl)-methyl]-phenyl}-acetamide;
- N-(4-Trifluoromethanesulfonyl-phenyl)-2-{4-[(4-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;
- 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid methyl ester;

- 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid;
- 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-pyridin-4-yl-benzamide;
- 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(4-methoxy-phenyl)-benzamide;

15

- 3-[4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoylamino]-benzoic acid ethyl ester;
- 4-(1-Ethyl-5-trifluoromethanesulfonyl-1H-benzoimidazol-2-yl)-N-(2-pyrrolidin-1-yl-ethyl)-benzamide;
- N-Ethyl-4-(1-ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzamide; 1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazole-2-carboxylic acid;
 - [2-(Benzoyl-butyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid methyl ester;
 - *N*-Benzyl-*N*-[butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-benzamide;
 - *N*-[Butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-*N*-(2-hydroxy-ethyl)-benzamide;
 - [2-(Acetyl-cyclopropyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
- 20 [2-(Acetyl-methyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
 - [2-(Benzoyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
 - *N*-Cyclohexyl-*N*-[(2,6-dimethyl-phenylcarbamoyl)-(4-trifluoromethanesulfonyl-phenyl)-methyl]-benzamide;
 - [2-(Acetyl-propyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
 - [2-(Acetyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
- 30 {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid;

```
4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid:
             2,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester;
             1-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-piperidine;
             4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-morpholine;
             [2.3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(2-nitro-phenyl)-
 5
      amine;
             1-(2-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-
      ol;
             [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(4-nitro-phenyl)-
10
      amine:
             1-(4-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-
      ol;
             4-[2-Hydroxy-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-
      benzenesulfonamide;
             4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino}-
15
      benzenesulfonamide;
             Bis-{[4-(2-nitro-4-trifluoromethanesulfonyl)-phenoxy]-phenyl} sulfone;
             1.2-Bis(4-trifluoromethylsulfonamidophenyl)ethane;
             1,2-Bis(2-methyl-4-trifluoromethylsulfonamidophenyl)ethane;
20
             1,3-Bis(4-trifluoromethylsulfonamidophenoxy)-2,2-dimethylpropane;
             1,3-Bis(4-trifluoromethylsulfonamidophenoxy)propane;
             1.4-Bis(4-trifluoromethylsulfonamidophenoxy)butane;
             1,4-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;
             1-(4-Aminophenoxy)-4-trifluoromethylsulfonamidophenoxy benzene;
             Bis(4-trifluoromethylsulfonamidophenyl) ether;
25
             1,3-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;
             2,5-Bis(4-trifluoromethylsulfonamidophenyl)-(1,3,4)oxadiazole;
             Bis(4-trifluoromethylsulfonamidophenyl)-1,4-diisopropylbenzene;
             5-Trifluoromethanesulfonylamino-1H-indole-2-carboxylic acid;
30
             1-Methyl-5-trifluoromethanesulfonylamino-1H-indole-2-carboxylic acid;
```

(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid;

1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide; 5-Trifluoromethanesulfonylamino-1H-indole-2-carboxylic acid phenylamide; 3-[(1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid; 3-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid; 4-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;

4-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic

- 3-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic acid;
- 4-{[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-methyl}-benzoic acid;
 - (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid tert-butyl ester;
 - 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
- 15 6-Trifluoromethanesulfonylamino-naphthalene-2-carboxylic acid;

5

10

20

acid;

- N, N-Bis[(6-carboxyl-naphthalen-2-yl)methyl] trifluoromethanesulfonamide;
- 6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carboxylic acid;
- 3-({6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carbonyl}-amino)-benzoic acid;
- 1-tert-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
- 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
- 1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-25 carboxylic acid;
 - 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;
 - 1-Carboxymethyl-5-(N,N-ditrifluoromethanesulfonyl)amino-1H-indole-2-carboxylic acid ethyl ester;
- 1-*tert*-Butoxycarbonylmethyl-5-(*N*,*N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-30 carboxylic acid ethyl ester;

- 1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
- 5 1-Benzyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; or 1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid.
 - 53. The method of claim 50 wherein ZR¹³ or R¹³ is a monocyclic heterocycle, a polycyclic heterocycle, a monocyclic aromatic hydrocarbon, a polycyclic aromatic hydrocarbon which may be substituted or unsubstituted.
 - 54. The method of claim 49 wherein Z is methylene which may be substituted or unsubstituted.
- 15 55. The method of claim 49 wherein Z is N which may be substituted or unsubstituted.

- 56. The method of claim 49 wherein the molecular weight of the compound is less than 1000 daltons.
- 57. The method of claim 56 wherein the molecular weight of the compound is less than 650 daltons.
- 58. The method of claim 49 wherein the phosphate binding protein is a phophohistidine, phosphoserine, phosphothreonine or phosphotyrosine binding protein.
 - 59. The method of claim 49 wherein the phosphate binding protein is an enzyme.
- 60. The method of claim 59 wherein the enzymatic phosphate binding protein forms a covalent phosphocysteine intermediate.

- 61. The method of claim 59 wherein the enzymatic phosphate binding protein is a metalloproteinase.
- 62. The method of claim 59 wherein the enzymatic phosphate binding protein is a phosphatase.
 - 63. The method of claim 59 wherein the enzymatic phosphate binding protein is a kinase.
- 10 64. The method of claim 63 wherein the kinase is a histidine kinase, a serine kinase, a threonine kinase or a tyrosine kinase.

20

- 65. The method of claim 49 wherein the activity of the phosphate binding protein is associated with protein tyrosine phosphatase signal transduction.
- 66. The method of claim 49 wherein the phosphate binding protein is a dual-specificity phosphatase, a histidine/lysine phosphatase, low-molecular weight phosphatase, a phosphotyrosine binding (PTB) domain, a pleckstrin homology domain, a Ser/Thr phosphatase, a Src homology 2 (SH2) domain, a protein tyrosine phosphatase, or a tyrosine-specific phosphatase.
- 67. The method of claim 62 wherein the phosphatase is Alpha phosphatase, Beta phosphatase, cdc25 phosphatase, cdi phosphatase, CD45 phosphatase, DEP1 phosphatase, Epsilon phosphatase, LAR phosphatase, MAP kinase phosphatase, MEG2 phosphatase, Mu phosphatase, 1B phosphatase, PEST phosphatase, PP2 β (calcineurin) phosphatase, SHP1 phosphatase, SHP2 phosphatase, Sigma phosphatase, T-cell phosphatase, VH1-like phosphatase, VHR phosphatase, Yersinia phosphatase, or Zeta phosphatase.
- 68. The method of claim 49 wherein the activity of the phosphate binding protein is determined by activity in an *in vitro* assay.

- 69. The method of claim 49 wherein the cell is a mammalian cell.
- 70. The method of claim 69 wherein the mammalian cell is a human cell.
- 5 71. A method for treating a disease, in a mammal, associated with a phosphate binding protein which comprises administering to a mammal in need thereof a therapeutically effective amount of a compound with a molecular weight less than 2000 daltons, or a pharmaceutically acceptable salt or solvate thereof, wherein the compound contains at least one functional group selected from the group consisting of C(R¹¹)F_aSO_bZ-, and R¹²SO_bC(R¹¹)F_m-;

wherein a is 1, 2 or 3 and b is 1 or 2 and m is 1 or 2;

Z is C or N;

15

25

wherein R¹¹ may be present or absent and if present is independently H, halo, C1-C4 alkyl, C₂-C₄ alkenyl or C₁-C₄ haloalkyl, which may be substituted or unsubstituted;

wherein R¹² is C1-C3 haloalkyl, C1-C3 alkyl which may be substituted or unsubstituted, or N which may be substituted or unsubstituted;

wherein the compound treats the disease associated with the phosphate binding protein in the mammal.

- The method of claim 71, wherein the compound has the formula CF₃SO₂-, CF₃SO₂N-, CF₃SO₂CO-, CF₃SO₂CO-, CF₃SO₂CN-, CF₃CF₂SO₂-or CHF₂SO₂-.
 - 73. The method of claim 72, wherein the compound is:

2-[4-(Difluoro-methanesulfonyl)-phenyl]-5-naphthalen-2-yl-oxazole;

[2-Nitro-4-(1,1,2,2-tetrafluoro-ethanesulfonyl)-phenyl]-p-tolyl-amine;

Bis(4-Trifluoromethylsulfonylbenzyl) ether;

4-Trifluoromethylsulfonylbenzyl 4-trifluoromethylsulfonylphenyl ether;

N,N-Bis(4-triluoromethylsulfonylbenzyl)benzamide;

1,2-Bis(4-trifluoromethylsullfonylphenyl)ethane;

N-(4-Trifluoromethylsulfonylbenzyl)-4-trifluoromethylsulfonylbenzamide;

N-(4-Trifluoromethylsulfonylbenzyl)benzamide;

- Bis(4-Trifluoromethylsulfonylphenyl) disulfide;
- Bis-(2-Nitro-4-trifluoromethylsulfonylphenyl) disulfide;
- 3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;
- [3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-phenyl]-acetic acid methyl
- 5 ester;

- 3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;
- 1,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-cyclopentane;
- 4-Methyl-2,6-bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;
- 4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid methyl ester;
 - 4-[3-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;
 - 1-(3,5-Bis-trifluoromethyl-phenyl)-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-1*H*-pyrazole-3-carboxylic acid methyl ester;
 - {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid ethyl ester;
 - 4-[3-(4-Trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;
 - {4-[4-(4-Trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid ethyl ester;
 - *N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{2-[(3-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;
 - N-(3-Trifluoromethanesulfonyl-phenyl)-2-{3-[(3-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;
 - N-(3-Trifluoromethanesulfonyl-phenyl)-2-{4-[(3-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;
- 25 3,6-Bis-(morpholin-4-ylmethyl)-2,5-bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzene;
 - [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-dimethyl-amine;
 - N-(2-Ethylamino-5-trifluoromethanesulfonyl-phenyl)-2-(4-methanesulfonyl-phenyl)-acetamide;
- 2-Hydroxy-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester;

- {2-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;
- {3-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;
- {4-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;
- 3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzamide;
- 3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid;

15

- N-(4-Trifluoromethanesulfonyl-phenyl)-2-{2-[(4-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;
- *N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{3-[(4-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;
- 10 *N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{4-[(4-trifluoromethanesulfonyl-phenyl)-methyl]-phenyl}-acetamide;
 - 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid methyl ester;
 - 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid;
 - 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-pyridin-4-yl-benzamide;
 - 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(4-methoxyphenyl)-benzamide;
 - 3-[4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoylamino]-benzoic acid ethyl ester;
 - 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(2-pyrrolidin-1-yl-ethyl)-benzamide;
 - *N*-Ethyl-4-(1-ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzamide; 1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazole-2-carboxylic acid;
- [2-(Benzoyl-butyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid methyl ester;
 - *N*-Benzyl-*N*-[butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-benzamide;
- N-[Butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-N-(2-hydroxy-30 ethyl)-benzamide;

- [2-(Acetyl-cyclopropyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
 [2-(Acetyl-methyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
- [2-(Benzoyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
- *N*-Cyclohexyl-*N*-[(2,6-dimethyl-phenylcarbamoyl)-(4-trifluoromethanesulfonyl-phenyl)-methyl]-benzamide;
- [2-(Acetyl-propyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
 - [2-(Acetyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;
 - {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid;
- 4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid;
 - 2,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester;
 - 1-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-piperidine;
 - $\hbox{$4\hbox{-}[2,3\hbox{-}Bis\hbox{-}(2\hbox{-}nitro\hbox{-}4\hbox{-}trifluoromethanesulfonyl\hbox{-}phenoxy)$-propyl]$-morpholine;}$
 - [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(2-nitro-phenyl)-
- amine;

- 1-(2-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-ol;
- [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(4-nitro-phenyl)-amine;
- 25 l-(4-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-ol;
 - 4-[2-Hydroxy-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-benzenesulfonamide;
- 4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-30 benzenesulfonamide;
 - $Bis-\{[4-(2-nitro-4-trifluoromethanesulfonyl)-phenoxy]-phenyl\} sulfone;.\\$

1,2-Bis(4-trifluoromethylsulfonamidophenyl)ethane; 1,2-Bis(2-methyl-4-trifluoromethylsulfonamidophenyl)ethane; 1.3-Bis(4-trifluoromethylsulfonamidophenoxy)-2,2-dimethylpropane; 1.3-Bis(4-trifluoromethylsulfonamidophenoxy)propane; 1.4-Bis(4-trifluoromethylsulfonamidophenoxy)butane; 5 1.4-Bis(4-trifluoromethylsulfonamidophenoxy)benzene; 1-(4-Aminophenoxy)-4-trifluoromethylsulfonamidophenoxy benzene; Bis(4-trifluoromethylsulfonamidophenyl) ether; 1.3-Bis(4-trifluoromethylsulfonamidophenoxy)benzene; 2,5-Bis(4-trifluoromethylsulfonamidophenyl)-(1,3,4)oxadiazole; 10 Bis(4-trifluoromethylsulfonamidophenyl)-1,4-diisopropylbenzene; 5-Trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid; 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide; 15 5-Trifluoromethanesulfonylamino-1H-indole-2-carboxylic acid phenylamide; 3-[(1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]benzoic acid: 3-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid; 4-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid; 20 4-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic acid; 3-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic acid; 4-{[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-methyl}-25 benzoic acid; (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid tert-butyl ester; 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester; 6-Trifluoromethanesulfonylamino-naphthalene-2-carboxylic acid; N,N-Bis[(6-carboxyl-naphthalen-2-yl)methyl] trifluoromethanesulfonamide; 30

6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carboxylic acid;

- 3-({6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carbonyl}-amino)-benzoic acid;
- 1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
- 5 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
 - 1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;

15

20

- 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;
- 1-Carboxymethyl-5-(*N*,*N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid ethyl ester;
 - 1-*tert*-Butoxycarbonylmethyl-5-(*N*,*N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid ethyl ester;
 - 1-Carboxymethyl-5-(*N*,*N* ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid;
 - 1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
 - 1-Benzyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; or
 - 1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid.
- 74. The method of claim 71 wherein the phosphate binding protein is associated with cancer, a solid tumor, glioma, melanoma, Kaposi's sarcoma, hemangioma, ovarian cancer, breast cancer, lung cancer, pancreatic cancer, liver cancer, prostate cancer, colon cancer, or epidermoid cancer.
- 75. The method of claim 71 wherein the phosphate binding protein is associated with diabetes.
- 76. The method of claim 71 wherein the phosphate binding protein is associated with neurological degenerative diseases.

- 77. The method of claim 71 wherein the phosphate binding protein is associated with osteoporosis.
- 78. The method of claim 71 wherein the phosphate binding protein is associated with a lymphatic function.
 - 79. The method of claim 76 wherein the phosphate binding protein is CD45.
 - 80. The method of claim 71, 72, 73, 74, 75 or 76 wherein the mammal is a human.

81. A method for treating cancer in a mammal which comprises administering to a mammal in need thereof a therapeutically effective amount of a compound with a molecular weight less than 2000 daltons, or a pharmaceutically acceptable salt or solvate thereof, wherein the compound contains at least one functional group selected from the group consisting of $C(R^{11})F_aSO_bZ_-$, and $R^{12}SO_bC(R^{11})F_m_-$;

wherein a is 1, 2 or 3 and b is 1 or 2 and m is 1 or 2;

Z is C or N;

10

15

20

25

wherein R^{11} may be present or absent and if present is independently H, halo, C1-C4 alkyl, C_2 - C_4 alkenyl or C_1 - C_4 haloalkyl, which may be substituted or unsubstituted;

- wherein R¹² is C1-C3 haloalkyl, C1-C3 alkyl which may be substituted or unsubstituted, or N which may be substituted or unsubstituted.
- 82. The method of claim 81, wherein the compound has the formula CF₃SO₂-, CF₃SO₂N-, CF₃SO₂CO-, CF₃SO₂CO-, CF₃SO₂CN-, CF₃CF₂SO₂-or CHF₂SO₂-.
 - 83. The method of claim 82, wherein the compound is:

 $\hbox{$2-[4-(Difluoro-methane sulfonyl)-phenyl]-5-naphthalen-2-yl-oxazole;}$

[2-Nitro-4-(1,1,2,2-tetrafluoro-ethanesulfonyl)-phenyl]-p-tolyl-amine;

Bis(4-Trifluoromethylsulfonylbenzyl) ether;

4-Trifluoromethylsulfonylbenzyl 4-trifluoromethylsulfonylphenyl ether; N,N-Bis(4-triluoromethylsulfonylbenzyl)benzamide;

```
1,2-Bis(4-trifluoromethylsullfonylphenyl)ethane;
             N-(4-Trifluoromethylsulfonylbenzyl)-4-trifluoromethylsulfonylbenzamide;
             N-(4-Trifluoromethylsulfonylbenzyl)benzamide;
             Bis(4-Trifluoromethylsulfonylphenyl) disulfide;
 5
             Bis-(2-Nitro-4-trifluoromethylsulfonylphenyl) disulfide;
             3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;
             [3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-phenyll-acetic acid methyl
      ester;
             3.5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;
10
             1,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-cyclopentane;
             4-Methyl-2,6-bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl
      ester;
             4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxyl-benzoic acid methyl ester;
             4-[3-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;
15
             1-(3,5-Bis-trifluoromethyl-phenyl)-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-
      1H-pyrazole-3-carboxylic acid methyl ester;
             {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy}-benzenesulfonyl]-phenoxy}-
      acetic acid ethyl ester;
             4-[3-(4-Trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;
20
             {4-[4-(4-Trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid
      ethyl ester;
             N-(3-Trifluoromethanesulfonyl-phenyl)-2-{2-[(3-trifluoromethanesulfonyl-
      phenylcarbamoyl)-methyl]-phenyl}-acetamide;
             N-(3-Trifluoromethanesulfonyl-phenyl)-2-{3-[(3-trifluoromethanesulfonyl-
25
      phenylcarbamoyl)-methyl]-phenyl}-acetamide;
             N-(3-Trifluoromethanesulfonyl-phenyl)-2-{4-[(3-trifluoromethanesulfonyl-
      phenylcarbamoyl)-methyl]-phenyl}-acetamide;
             3,6-Bis-(morpholin-4-ylmethyl)-2,5-bis-(2-nitro-4-trifluoromethanesulfonyl-
      phenoxy)-benzene;
```

[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-dimethyl-amine;

- *N*-(2-Ethylamino-5-trifluoromethanesulfonyl-phenyl)-2-(4-methanesulfonyl-phenyl)-acetamide;
- 2-Hydroxy-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester;
 - {2-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;
 - {3-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;
 - {4-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;
 - 3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzamide;
 - 3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid;

15

- 10 *N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{2-[(4-trifluoromethanesulfonyl-phenyl)-methyl]-phenyl}-acetamide;
 - N-(4-Trifluoromethanesulfonyl-phenyl)-2-{3-[(4-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;
 - *N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{4-[(4-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;
 - 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid methyl ester;
 - 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid;
 - 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-pyridin-4-yl-benzamide;
 - 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(4-methoxyphenyl)-benzamide;
 - 3-[4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoylamino]-benzoic acid ethyl ester;
- 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(2-pyrrolidin-1-yl-ethyl)-benzamide;
 - N-Ethyl-4-(1-ethyl-5-trifluoromethanesulfonyl-1H-benzoimidazol-2-yl)-benzamide;
 - 1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazole-2-carboxylic acid;
- [2-(Benzoyl-butyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid methyl ester;

N-Benzyl-N-[butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]benzamide: N-[Butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-N-(2-hydroxyethyl)-benzamide; [2-(Acetyl-cyclopropyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]acetic acid ethyl ester; [2-(Acetyl-methyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester; [2-(Benzoyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylaminolacetic acid ethyl ester; N-Cyclohexyl-N-[(2,6-dimethyl-phenylcarbamoyl)-(4-trifluoromethanesulfonylphenyl)-methyl]-benzamide; [2-(Acetyl-propyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester; [2-(Acetyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]acetic acid ethyl ester; {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy}-benzenesulfonyl]-phenoxy}acetic acid; 4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid; 2,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester; 1-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-piperidine; 4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-morpholine; [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(2-nitro-phenyl)amine; 1-(2-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2ol;

5

10

15

20

25

30

amine;

1-(4-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-ol;

[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(4-nitro-phenyl)-

4-[2-Hydroxy-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]benzenesulfonamide; 4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]benzenesulfonamide; 5 Bis-{[4-(2-nitro-4-trifluoromethanesulfonyl)-phenoxy]-phenyl} sulfone; 1,2-Bis(4-trifluoromethylsulfonamidophenyl)ethane; 1,2-Bis(2-methyl-4-trifluoromethylsulfonamidophenyl)ethane; 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)-2,2-dimethylpropane; 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)propane; 1,4-Bis(4-trifluoromethylsulfonamidophenoxy)butane; 10 1,4-Bis(4-trifluoromethylsulfonamidophenoxy)benzene; 1-(4-Aminophenoxy)-4-trifluoromethylsulfonamidophenoxy benzene; Bis(4-trifluoromethylsulfonamidophenyl) ether; 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)benzene; 15 2,5-Bis(4-trifluoromethylsulfonamidophenyl)-(1,3,4)oxadiazole; Bis(4-trifluoromethylsulfonamidophenyl)-1,4-diisopropylbenzene; 5-Trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid; 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide; 20 5-Trifluoromethanesulfonylamino-1H-indole-2-carboxylic acid phenylamide; 3-[(1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]benzoic acid; 3-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid; 25 4-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid; 4-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic acid; 3-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic acid; 4-{[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-methyl}-30 benzoic acid;

- (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid tert-butyl ester: 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester; 6-Trifluoromethanesulfonylamino-naphthalene-2-carboxylic acid; N,N-Bis[(6-carboxyl-naphthalen-2-yl)methyl] trifluoromethanesulfonamide; 5 6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carboxylic acid; amino)-benzoic acid; 1-tert-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1H-indole-2carboxylic acid ethyl ester; 10 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester; 1-tert-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1H-indole-2carboxylic acid; 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; 1-Carboxymethyl-5-(N,N-ditrifluoromethanesulfonyl)amino-1H-indole-2-carboxylic 15 acid ethyl ester; 1-tert-Butoxycarbonylmethyl-5-(N,N-ditrifluoromethanesulfonyl)amino-1H-indole-2carboxylic acid ethyl ester; 1-Carboxymethyl-5-(N,N- ditrifluoromethanesulfonyl)amino-1H-indole-2-carboxylic 20 acid: 1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester; 1-Benzyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; or 1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid. 25 84. The method of claim 81 wherein the mammal is a human. 85. The method of claim 81 wherein the cancer is a solid tumor.
- 30 86. The method of claim 84 wherein the cancer is glioma, melanoma, adenocarcinoma, Kaposi's sarcoma or hemangioma.

- 87. The method of claim 81 wherein the cancer is ovarian, breast, lung, pancreatic, liver, prostate, colon, testicular or epidermoid cancer.
- 88. A method for preventing cancer in a mammal which comprises administering to a mammal in need thereof a therapeutically effective amount of a compound with a molecular weight less than 2000 daltons, or a pharmaceutically acceptable salt or solvate thereof, wherein the compound contains at least one functional group selected from the group consisting of $C(R^{11})F_aSO_bZ_-$, and $R^{12}SO_bC(R^{11})F_{m^-}$;

wherein a is 1, 2 or 3 and b is 1 or 2 and m is 1 or 2;

Z is C or N;

5

10

15

20

wherein R^{11} may be present or absent and if present is independently H, halo, C1-C4 alkyl, C_2 - C_4 alkenyl or C_1 - C_4 haloalkyl, which may be substituted or unsubstituted;

wherein R¹² is C1-C3 haloalkyl, C1-C3 alkyl which may be substituted or unsubstituted, or N which may be substituted or unsubstituted.

89. A method of inhibiting phosphatase activity which comprises contacting a mammalian cell having a phosphatase with a compound having a molecular weight of less than 2000 daltons, wherein said compound is a non-ionic trifluoromethylsulfonyl or trifluoromethyl sulfonamide compound.